

Re: SR time dilation on remote objects ?

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From: vonroach (*hadrainc_at_earthlink.net*)

Date: 07/14/04

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On Wed, 14 Jul 2004 11:11:47 +0200, Bjoern Feuerbacher
<feuerbac@thphys.uni-heidelberg.de> wrote:

>vonroach wrote:

>> *On Mon, 12 Jul 2004 14:50:40 +0200, Bjoern Feuerbacher*

>> *<feuerbac@thphys.uni-heidelberg.de> wrote:*

>>

>>

>>>*Err, no. The space between them expands. This makes it only*

>>>*look like as if they move apart.*

>>

>>

>> *Err, what would it take for you to conclude that they really move*

>> *farther apart? Perhaps someone would say they move farther apart,*

>> *making it look like the space between them expands.*

>

>*What would it take for you to conclude that the sun moves around the*

>*earth? (please read the following before answering this question)*

>

>*As I explained in another post (to Marcel Luttgens, IIRC): saying that*

>*the galaxies really move, or that they only appear to move is*

>*essentially a matter of "taste" – i.e., these are two different*

>*descriptions of the same observations, in a sense observations from*

>*different frames of reference.*

And when galaxies collide, it is `taste' whether one says they move and collide or that they `appear' to move and collide? And that all galactic observations leave us with a choice of their moving or `appear' to move? Do they rotate? One could choose to say that is movement. If something doesn't move, then all this spacetime that we have conjured up will go to waste, and time will cease except in a tiny little solar system where movement occurs – spin, precession, rotation, translation – a veritable solar-planet-moon ballet.

>*That's very close to the difference between geo- and heliocentrism:*

>*in a frame of reference centered on the earth, one could say that the*

>*sun (and essentially the rest of the universe) goes around the earth.*

>*One can transform all laws of nature to this frame of reference and*

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>describe everything happening in the universe in it. But obviously, the
>other frame of reference, in which the earth goes around the sun, is
>much preferable, and is used by essentially everyone.
>
>
>
>> A realist might
>> even say that the distance from one to the other is based on flimsy
>> evidence.
>
>That would not be a realist, but an ignorant, who has no clue of
>how distances are determined in astronomy.
>
>
>> What is your frame of reference?
>
>See above.
>
>
>> Can you give coordinates in spacetime for both.
>
>For both what?
>
>And coordinates in which frame of reference?
>
>
>> Another voice would pop up, 'look the event
>> occurred millions of years ago, you've no way to know what the
>> relative positions are at any given moment.
>
>Depends on what you mean by "know". Cosmologists can *predict* what
>the relative positions are in any moment, based on the distances and red
>shifts measured.
>
>
>Bye,
>Bjoern